What is claimed is:

1. A safety system for focused energy applications that ensures proper position and orientation of an application source relative to a preselected application area and prevents operation of an application beam should persons or objects intersect a security boundary, comprising:

a focused energy application source having a directional output port;

one or more detectors positioned near said output port, in a fixed position relative to said output port, and oriented in substantially the same direction as said output port;

one or more safety beam emitters for generating a low power safety beam, wherein said safety beam emitters are placed in a position selected from the group consisting of a direct position wherein said safety beam is oriented toward a preferred position of said application source, and an indirect position wherein said safety beam is oriented toward said application area, and wherein said safety beam is at least partially reflected from said application area toward said preferred position of said application source; and

a control system, wherein said control system initiates a safety response if an amount of radiation from said safety beam emitter as received by said detector decreases below a preselected level.

2. The safety system according to claim 1, wherein said one or more safety beam emitters in said direct position are located near said application area, and directed substantially toward a preferred position of said application source.

3. The safety system according to claim 1, wherein said application source is a laser.

4. The safety system according to claim 1, wherein said low power safety beam comprises an optical system to control a divergence of said safety beam.

5. The safety system according to claim 1, wherein said safety beam emitter operates in the visible spectrum.

6. The safety system according to claim 1, wherein said detector comprises a photodiode.

7. The safety system according to claim 6, wherein said detector further comprises a filter centered at a wavelength of said safety beam.

8. The safety system according to claim 1, wherein said detector has means to control an aperture angle of said safety beam radiation to be detected, and wherein said aperture control means is selected from at least one of the group consisting of an objective and a collimator.

9. The safety system according to claim 1, wherein said safety response is selected from at least one of the group consisting of shutting off said application source, activating means to block an application beam emitted from said application source, and activating an alarm.

10. The safety system according to claim 9, wherein said blocking means is a shutter.

11. The safety system according to claim 1, wherein said application source is selected from the group consisting of a particle beam generator, a water drill, a water cutting device, and a water surfacing device.

12. The safety system according to claim 1, wherein said detectors face a direction parallel to a direction of said application source.

13. The safety system according to claim 1, wherein said detectors form a ring facing said application area.

14. The safety system according to claim 1, wherein said decrease in said radiation received by said detector is due to a breach of a portion of said security boundary, wherein said security boundary is defined by a portion of said divergent beam propagating from said safety beam emitter and incident on said detectors.

15. The safety system according to claim 1, wherein said decrease in said radiation received by said detector is due to positioning of said source to a location outside a volume occupied by said safety beam.

16. The safety system according to claim 1, wherein said decrease in said radiation received by said detector is due to an orientation of said application source such that said source is directed away from a treatment site.

17. The safety system according to claim 1, wherein said application source is connected to a maneuverable handpiece.